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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/676,620	09/30/2003	Michael R. Harris	5620-007	7940

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EXAMINER	
LAO, LUN S	

ART UNIT	PAPER NUMBER
2615	

MAIL DATE	DELIVERY MODE
05/18/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/676,620	HARRIS, MICHAEL R.	
	Examiner	Art Unit	
	Lun-See Lao	2615	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *30 September 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-12* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-12* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *09-30-2003*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Introduction

1. This action is in response to the 10/676,620 application filed on 09-30-2003. Claims 1-12 are pending.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-3, 5-10 and 12 are rejected under 35 U.S.C. 102(b) as being anticipated by Porter (US PAT. 5,515,372).

Consider claim 1 Porter teaches an FM transmitter (see fig.1 (14)) with integrated modulator used to transfer text data from an auxiliary audio device (11) to an FM receiver comprising:

a processor (22), coupled to the auxiliary audio device (11), that receives the text data to be transmitted to the FM receiver and processes the data to develop a processed data signal;

a signal combiner (16, mixer) that combines the processed data signal (18) with an audio signal (12) provided by the consumer electronic device and encoded according to a frequency modulation (FM) standard to generate a composite FM signal for transmission to the FM receiver (see col. 4 line 26-col. 5 line 5).

Consider claims 2-3 Porter teaches that an integrated transmitter of the processor (see fig.1 (22)) is configured to process the data signal according to a radio data system (RDS) standard to generate a modulated RDS signal as the processed data signal; and the signal combiner sums (16) the processed data signal (18) and the encoded audio signals (12 and see col. 4 line 26-63); and an integrated transmitter of the processor (see fig.1 (22)) is a programmed processor including software that controls the processor to generate the modulated RDS signal as the processed data signal(see col. 4 line 26-col. 5 line 5).

Consider claims 5-7 Porter teaches an integrated transmitter of the processor (see fig.1 (22)) is configured to receive a digital audio input signal and to encode the digital audio signal to provide a digital FM encoded audio signal; and the signal combiner (16) is summing circuitry in the processor that sums the digital FM encoded audio signal (12) and the modulated RDS signal (18) to generate the composite FM signal (see col. 4 line 25-63); and the processor (see fig.1 (22)) is configured to convert the text data into speech to provide a speech signal and to encode the speech signal as an FM data signal to provide the FM data signal as the processed data signal; and the signal combiner (16) time-division multiplexes the FM data signal and the FM encoded audio signal to generate the composite FM signal (see col. 7 line 35-67); and the processor (see fig.1 (22)) is a programmed processor including software that controls the processor to convert the text data into speech to provide the speech and to encode the speech signal as an FM data signal to provide the FM data signal as the processed data signal (see col. 7 line 35-67).

Consider claims 8-10 Porter teaches that an integrated transmitter of the processor (see fig.1 (22)) is configured to receive a digital audio input signal and to encode the digital audio signal to provide a digital FM encoded audio signal; and the signal combiner (16) is multiplexing circuitry in the processor that time-division multiplexes the digital FM encoded audio signal and the FM data signal to generate the composite FM signal (see col. 7 line 35-67); and the processor (see fig.1 (22)) is the control processor of the auxiliary audio device (11 and see col. 4 line 25-62); and the auxiliary audio device (see fig.1 (11)) is a device selected from a group consisting of a CD player, a CD-MP3 player, a universal satellite receiver and a digital audio broadcast receiver (see col. 5 line 35-45).

Consider claim 12 porter teaches that an integrated transmitter of the processor (see fig.1 (22)) and signal combiner (16) are implemented as a separate device that is configured to be attached to line and data output terminals of the auxiliary audio device (11 and see col. 25-63).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Porter (US PAT. 5,515,372).

Consider claim 11 porter teaches an integrated transmitter of the auxiliary audio device (see fig. 1 (11)) to receive commands to control the auxiliary audio device (11) and to receive commands to select text data to be transmitted to the FM receiver (see col. 5 line 35-45); but porter does not explicitly teach a wireless remote control receiver.

However, a wireless remote control receiver is well known in the art (official notice is taken).

Therefore, it would have been obvious that the radio data control system as taught by porter could have used a wireless remote control receiver as claimed to provide more convenience and more choice to the user for entertainment.

6. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Porter (US PAT. 5,515,372) in view of Ohnishi (US PAT 5,682,431).

Consider claim 4 Porter does not teach an analog FM stereo encoder which generates the FM encoded audio signal as an analog FM encoded audio signal;

a digital to analog converter coupled to the processor to receive the processed data signal and to provide an analog data signal corresponding to the processed data signal; and

a band-pass filter that filters the analog data signal to exclude signal components outside of a range of frequencies acceptable for an RDS modulated signal;

wherein the signal combiner sums the band-pass filtered analog data signal and the analog FM signal to produce the composite FM signal.

However, Ohnishi teaches an analog FM stereo encoder (see fig.4) which generates the FM encoded audio signal as an analog FM encoded audio signal;

a digital to analog converter (7) coupled to the processor (1) to receive the processed data signal and to provide an analog data signal corresponding to the processed data signal; and

a band-pass filter (8) that filters the analog data signal to exclude signal components outside of a range of frequencies acceptable for an RDS modulated signal (5);

wherein the signal combiner sums (9) the band-pass filtered analog data signal (8) and the analog FM signal to produce the composite FM signal (f0-fc and see col. 6 line34-col. 7 line 50).

Therefore, it would have been obvious to one of the ordinary skill in the at the time the invention was made to combine the teaching of Ohnishi into Porter so that noise into the radio data control system could have been effectively reduced.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Mankovitz (US PAT. 5,119,503) is cited to show other related intergrated short range RDS FM transmitter.

8. Any response to this action should be mailed to:

Mail Stop ____(explanation, e.g., Amendment or After-final, etc.)

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Facsimile responses should be faxed to:
(571) 273-8300

Hand-delivered responses should be brought to:
Customer Service Window
Randolph Building
401 Dulany Street
Alexandria, VA 22314

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lao,Lun-See whose telephone number is (571) 272-7501 The examiner can normally be reached on Monday-Friday from 8:00 to 5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chin Vivian, can be reached on (571) 272-7848.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 whose telephone number is (571) 272-2600.

Lao,Lun-See
Patent Examiner
US Patent and Trademark Office
Knox
571-272-7501
Date 05-8-2007

VIVIAN CHIN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600